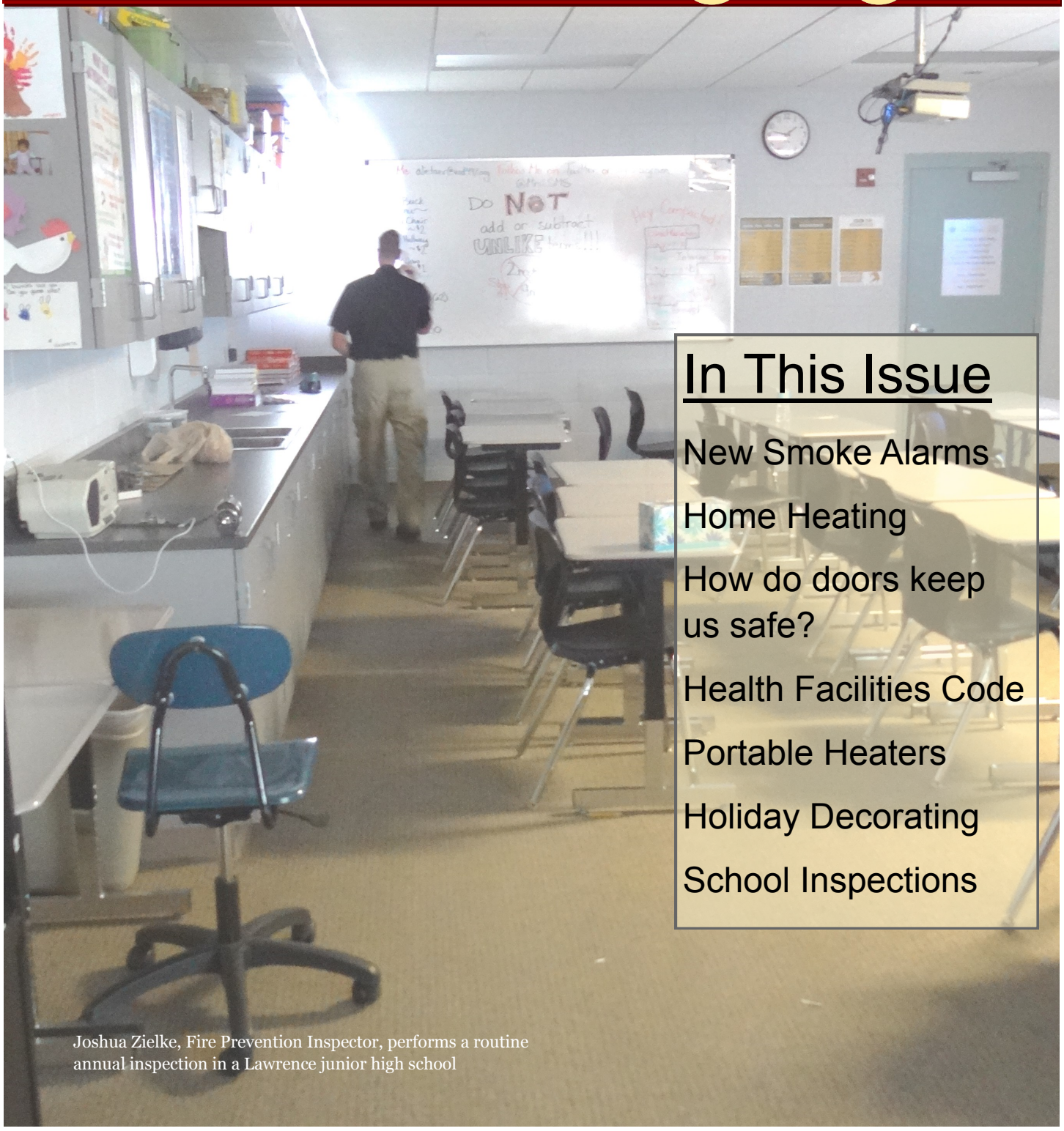
Office of the State Fire Marshal—Prevention Division

Winter 2017

PREVENTION Highlights



Joshua Zielke, Fire Prevention Inspector, performs a routine annual inspection in a Lawrence junior high school

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PREVENTION Highlights

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Our Mission

The Office of the State Fire Marshal (OSFM) is dedicated to protecting lives and property from the hazards of fire or explosion and will promote prevention, educational and investigative activities to mitigate incidents, promote life safety and deter crimes.

The Fire Prevention Division

The goal of the Fire Prevention Division is to reduce the potential impact of fire and explosion hazards where people live, work and congregate (other than one– or two-family dwellings) through code enforcement, inspections, plans review, licensing, and public education.

Prevention Highlights

Prevention Highlights is published quarterly to provide facility managers and others with information necessary to operate fire-safe facilities.

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Edu-Note by Joel

I have now been with the OSFM for 6 months now and it has been an amazing experience. It has been a joy to travel around Kansas, and even Arizona and California, meeting new people and furthering my experience in Fire Prevention.

As many of you know, we have now fully moved to NFPA 101 LSC 2012 edition. This change occurred November 1st. It has been a learning curve to all people affected but slowly and surely our whole state will be extremely familiar to the new edition of the LSC. As this is a change for us all, if you would like a detailed explanation of what the changes are and how this would apply to your facility, please contact me and I would gladly come to your facility and go over all the codes changes.

At this moment, I am in sunny Anaheim, California taking my Certified Fire Inspector 1 Class. This is a five day training course that the NFPA offers to help the taker enhance professionalism, ensure proficiency in the use of codes and standards, promote professional development and ensure a uniform, fair process for certification that is accessible to everyone. The course is very intensive but very useful and I have learned so much. I am looking forward to bringing this back with me to further my experience to help you all as much as I can.

If you are interested in scheduling a presentation by our office, please call or send me an email and I will be happy to work with you and help out in any way.

-Joel Beckner, Education Consultant

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New Smoke Alarms Available

By Kelly Ingold, Education Consultant

In 2014, the Office of the State Fire Marshal (OSFM) implemented a free statewide residential smoke alarm installation program as a fire prevention effort. We have decided to change from our 10-year sealed lithium battery smoke alarm to a 10 -year sealed lithium battery smoke/ carbon monoxide (CO) dual alarm. We are also adding two different kinds of smoke alarms for deaf/ hard of hearing (DHH) as well. The DHH alarms will have a separate order form and need a physician's signature. Both smoke alarm order forms are available on our website.

According to FEMA, more than 150 people in the U.S. die every year from accidental nonfire related carbon monoxide poisoning. CO is a colorless and odorless gas. CO poisoning can occur when a fuel-burning appliance or machine (furnace, heater, generator, range, cooktop, grill, etc.) is not working or vented properly. Breathing in CO at high levels can be fatal. As with smoke alarms, make sure to install CO alarms in every bedroom and sleeping area in your home and keep them at least 15 feet away from fuel-burning appliances. If your house has more than one level, make sure there's an alarm on each one, even those without bedrooms. And remember to test your alarms monthly. Only working alarms can save lives. Carbon monoxide gas is invisible and odorless; you need alarms to detect it because human senses simply cannot.

People who are deaf or hard-of-hearing cannot depend on the sound of the regular alarm to alert them to a fire. That is why it is imperative they have a DHH smoke alarm installed. There are two different kinds of DHH smoke alarms that we will have available. The first kind of DHH smoke alarm is a bedside fire alarm and clock by Lifetone. This bedside alarm and clock combines the technologies scientifically proven to be most effective for waking people in an emergency: loud 520 Hz alarm sound, baritone voice announcing "Fire! Get out!", powerful pulsed bed shaker vibration (activated by the sound of the alarm), and the bright orange screen flashing "FIRE" tells you what the emergency is. The second kind of DHH smoke alarm is by Gentex and is a plug-in style with a strobe alarm. It is designed to alarm a room with a piercing loud alarm and bright strobe. This portable smoke alarm is AC-powered, so you don't need an electrician to install it. These alarms respond to the sound of the home's traditional smoke alarm. Because these DHH alarms are portable, they can travel with you on vacation or visits to the homes of family and friends. To survive a house fire, you need to be able to exit the house within three minutes or less. If you are hard-of-hearing, it's important for you to install equipment that can help you and your family make a safe and hasty escape.

GET ALARMED KANSAS

Remember to test your smoke alarms every month, replace the batteries at least once a year (unless you have a sealed 10-year lithium battery), and develop and practice your fire escape plan with all members of your family at different times of the day. You should find two ways out of every room and choose a specific meeting place. Be sure to check your smoke alarm's manufacture date on the back of the alarm and replace it if it's 10 years or older.

Fire departments and communities that are want topartner with OSFM to help reduce fire deaths and injuries by installing smoke alarms and educating families on fire safety can visit https://firemarshal.ks.gov/smokealarm or email kelly.ingold@ks.gov with any questions.

Keep your home warm...and safe

The high cost of home heating fuels and utilities have caused many Americans to search for alternate sources of home heating. The use of wood burning stoves is growing and space heaters are selling rapidly, or coming out of storage. Fireplaces are burning wood and manmade logs. All these methods of heating may be acceptable. They are, however, a major contributing factor in residential fires. Many of these fires can be prevented. The following fire safety tips can help you maintain a fire safe home this winter.

- Be sure that kerosene heaters are legal in your area.
- Be sure your heater is in good working condition. Inspect exhaust parts for carbon buildup. Be sure the heater has an emergency shut off in case the heater is tipped over.
- Never use fuel burning appliances without proper room venting. Burning fuel (coal, kerosene, or propane, for example) can produce deadly fumes.
- Use ONLY the fuel recommended by the heater manufacturer. NEVER introduce a fuel into a unit not designed for that type fuel.
- Keep kerosene, or other flammable liquids stored in approved metal containers, in well ventilated storage areas, outside of the house.
- NEVER fill the heater while it is operating or hot. When refueling an oil or kerosene unit, avoid overfilling.
- Refueling should be done outside of the home (or outdoors). Keep young children away from space heaters—especially when they are wearing night gowns or other loose clothing that can be easily ignited.
- When using a fuel burning appliance in the bedroom, be sure there is proper ventilation to prevent a buildup of carbon monoxide.
- Wood stoves and fireplaces are becoming a very common heat source in homes. Careful attention to safety can minimize their fire hazard.

To use them safely:

¨ Be sure the fireplace or stove is installed properly. Wood stoves should have adequate clearance (36”) from combustible surfaces and proper floor support and protection.

¨ Wood stoves should be of good quality, solid construction and design, and should be laboratory tested.

¨ Have the chimney inspected annually and cleaned if necessary, especially if it has not been used for some time.

¨ Do not use flammable liquids to start or accelerate any fire. 10 www.ksfm.ks.gov Furnace Heating

¨ Keep a glass or metal screen in front of the fireplace opening, to prevent embers or sparks from jumping out, unwanted material from going in, and help prevent the possibility of burns to occupants.

¨ The stove should be burned hot twice a day for 15-30 minutes to reduce the amount of creosote buildup.

¨ Don’t use excessive amounts of paper to build roaring fires in fireplaces. It is possible to ignite creosote in the chimney by overbuilding the fire.

¨ Never burn charcoal indoors. Burning charcoal can give off lethal amounts of carbon monoxide.

¨ Keep flammable materials away from your fireplace mantel. A spark from the fireplace could easily ignite these materials.

¨ Before you go to sleep, be sure your fireplace fire is out. **NEVER close your damper with hot ashes in the fireplace.** A closed damper will help the fire to heat up again and will force toxic carbon monoxide into the house. If synthetic logs are used, follow the directions on the package. **NEVER** break a synthetic log apart to quicken the fire or use more than one log at a time. They often burn unevenly, releasing higher levels of carbon monoxide.

It is important that you have your furnace inspected to ensure that it is in good working condition. Be sure all furnace controls and emergency shutoffs are in proper working condition.

Leave furnace repairs to qualified specialists. Do not attempt repairs yourself unless you are qualified. Inspect the walls and ceiling near the furnace and along the chimney line. If the wall is hot or discolored, additional pipe insulation or clearance may be required.

See article on Portable Heaters on page 9

How do DOORS keep us safe?

By Jason Lady, Fire Protection Specialist

We pass through doors every day and often are unaware of their importance in life safety. A lack of awareness can lead to the ineffectiveness of a fire-rated door. With a little knowledge, building owners and occupants can help to provide life safety measures in their facilities.

The role of a fire door is to inhibit the spread of smoke, flames and gases. Each assembly will have a rating requirement which is determined by specific codes. For example, corridor doors will typically have a 20 minute fire rating. You can locate the fire rating label on a door by looking on the door edge or frame. Per code, these labels should be legible and not painted over or covered up.

In order for a rated fire door to be effective and perform as it was designed, it must be self or automatic-closing and positively latched in the frame. It is common during the inspection process for OSFM inspectors to see doors being held open by the use of a wedge, trash can, or another creative device. The problem starts when an open door allows smoke and flames to spread into the space instead of withholding those elements to allow occupants to evacuate promptly.

The positive latching requirement for fire doors ensures that the pressure from a fire is not able to push the door open and allow smoke and flames to filter in. When an item such as tape, magnets, or even the malfunction of the latching hardware becomes interrupted, this then causes to door to be noncompliant and not work properly.

Penetrations and modifications in fire-rated doors can also cause them to become ineffective. If holes are left in a fire door when hardware it removed, or changed, then that door no longer serves as fire door and loses its rating. Those holes must be filled with steel fasteners or the same material as the door or frame. There is also a fire caulk that is available for use in small penetrations.

NFPA 101 and International Fire Code (IFC) contain annual inspection requirements for fire doors. It is the responsibility of the building owners to make sure these code requirements are conducted by a third -party inspector and documented. Any fire marshal or inspector can review this documentation and make sure you are in compliance with code.

Keeping your fire-rated doors properly maintained can not only save you from property damage but also the potential loss of life. Knowing why the door is designed to stay closed and latched is more of a reason to get in the practice of closing the door behind you.

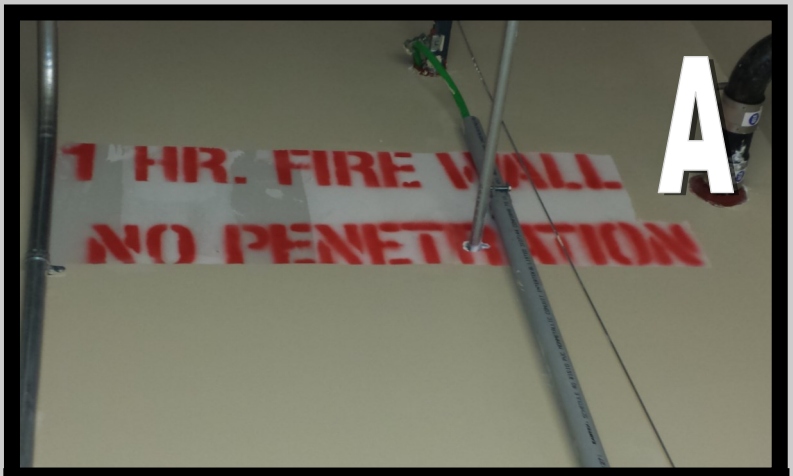
SPOT the violations

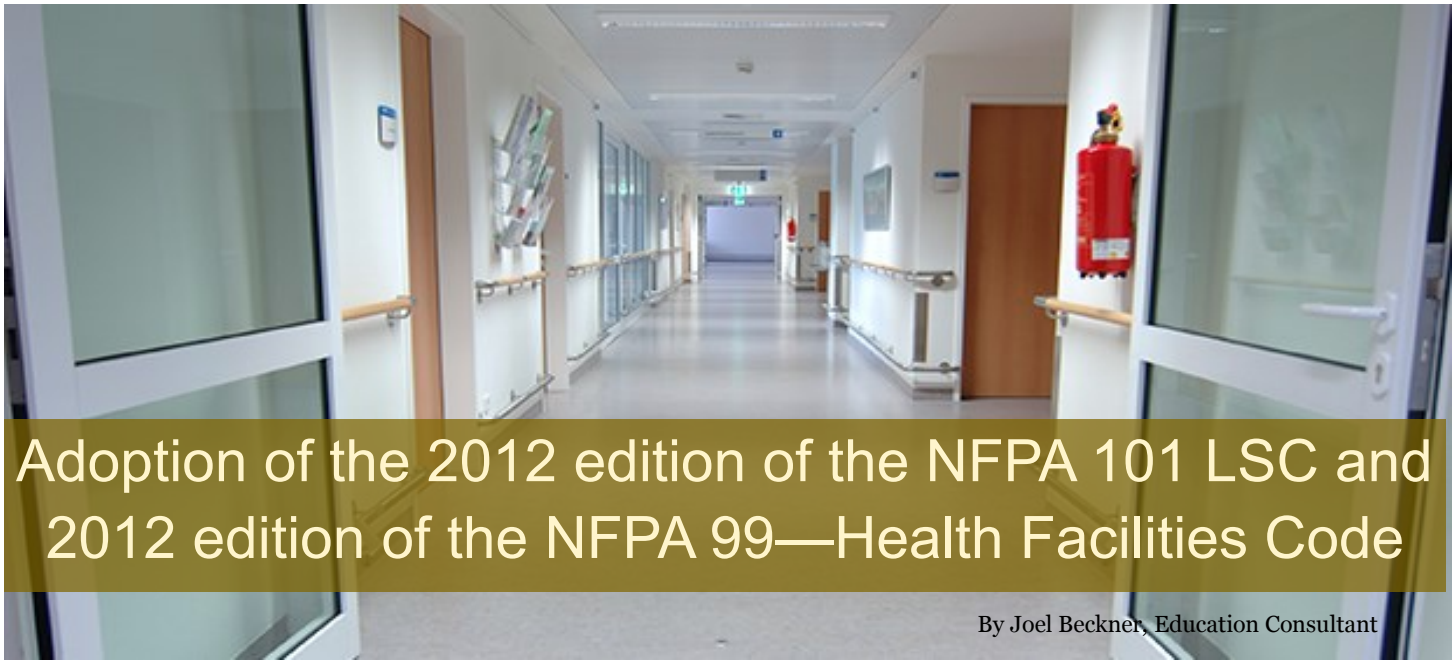
A

B

C

D





Adoption of the 2012 edition of the NFPA 101 LSC and 2012 edition of the NFPA 99—Health Facilities Code

By Joel Beckner, Education Consultant

With the new code changes that have been adopted for LSC 2012, there are some small changes to Written Fire Safety Plan that is good to note.

Use of alarms.
Employees are required to know and follow the fire response plan/ procedures and follow the fire response plan and any instruction that are announced over the fire alarm and PA systems

Transmission of alarms to fire department.
Employees are required to know the locations of all manual pull stations in their work area. The activation of the alarm is required no matter the size of the fire.

Emergency phone call to fire department.
Individual responsible needs to be designated in the fire plan. A redundancy in case the fire alarm does not transmit. It gives the fire department additional information such as location, size and type.

Response to alarms.
R.A.C.E: An acronym that hospital personnel use to remember their duties in case of fire. It stands for RESCUE, ALARM, CONFINE, EXTINGUISH/EVACUATE

- **Rescue** all patients, visitors, employees, staff and volunteers form immediate danger
- **Alarm** by pulling the closest fire pull-station and by dialing 911
- **Confine** the area by closing all doors and windows
- **Extinguish** the fire if the fire is small. **Evacuate** patients from the area

A larger facility may also designate duties of staff by department.

Isolation of fire.
Confine the area by closing the windows and the door to the room of origin

There should be a method for identifying all rooms that have been evacuated

Evacuation of immediate area.
Rescue all patients, visitors, employees, staff and volunteers from immediate danger/room of origin. Preventing the spread of fire and smoke beyond the point of origin is the first and best line of defense. Determine safety of exit routes: primary and alternate exits and fire/smoke compartments to be used in event one is untenable.

Evacuation of smoke compartment.
Begin with evacuation of the triangle or rooms surrounding the room of origin – the rooms on either side and directly across the hall. Systematically remove the remaining occupants within the smoke compartment (fire doors to fire doors or fire doors to exit.)

ANSWERS TO "SPOT THE VIOLATIONS" on Page 7

A. Penetrations of a fire rated wall; B. Manual Pull Station installed too high; C. Means of egress ob-structed; D. Smoke alarm covered up in dorm room

Preparation of floors and building for evacuation.

- Keep fire doors closed except when passing through them in order to avoid the spread of smoke/fire
- Keep patients and visitors in rooms if possible until directed to do otherwise
- Clear corridors of equipment
- Do not use elevators
- At this point evacuation by ambulation status (ambulatory, walkers, wheelchairs, bedridden) would be prudent
- In multi-story buildings – evacuate the floors above and below the compartment of origin
- In larger buildings, there may be plans for evacuation of the adjacent smoke compartment to another smoke compartment (two compartments away from the compartment of origin).

Extinguishment of fire.

- P.A.S.S: Duties for discharging a fire extinguisher - stands for PULL, AIM, SQUEEZE, SWEEP
- Do not attempt to fight a fire that is spreading beyond the immediate area where it started, is already a large fire or is overhead
- The fire could potentially spread and block your escape
- You are not trained or feel comfortable operating a fire extinguisher
- You are in doubt about whether the extinguisher is designed for the type of fire at hand or if it is large enough to fight the fire
- Staff should be aware of the types of fire extinguishers in the building and what they are used for.

Portable Heater Safety

By Jack Chatmon, Fire Protection Specialist

According to NFPA, space heaters accounted for one-third (30%) of the home heating fires and three-fourths (73%) of home heating fire deaths in 2006. Space heaters (portable and stationary) were involved in an estimated 64,100 U.S. home structure fires, 540 civilian deaths, 1,400 civilian injuries, and $9.4 million in direct property damage.

Much of the injury and damage was caused by the heating elements used in some types of electric heaters, which are hot enough to ignite nearby combustibles such as draperies, paper, clothing, furniture, and flammable liquids.

Portable Heater Safety Tips

- Look for a heater that is listed with a nationally-recognized testing laboratory. These heaters are tested to meet specific safety standards, and manufacturers are required to provide important use and care information to the consumer.
- Before using the heater, read and follow the instructions for its operation and maintenance.
- Never run the heater's cord (or any cord) under rugs, carpeting or furniture.
- Plug portable heaters directly into a wall outlet. Do not plug a space heater into a surge protector, multi-outlet box or extension cord. The high current flow can cause components to deteriorate.
- Do not leave the heater operating unattended or operating while sleeping.
- To prevent electrical shocks and electrocutions, always keep portable electric heaters away from water. And never touch an electric heater if you are wet.
- Do not use an electric heater as a dryer by placing clothing over it.
- Keep the heater in a safe working condition in accordance with the manufacturer's instructions. Replace missing guards, controls or frayed wiring at once. Never operate a defective heater.
- Do not place the heater where children might play near it or where people might trip over or bump into it.
- Place the heater on a level surface for stability.

The Life Safety Code, NFPA 101, section 19.7.8 prohibits the use of portable space heaters in health care occupancies but provides the following exception: Portable space heating devices shall be permitted to be used in non-sleeping staff and employee areas where the heating elements of such devices do not exceed 212 degrees F. This requirement applies to all hospitals and medical office buildings.

Following these safety tips will help keep you warm, but not too warm!

Decorating for the holidays

By Joel Beckner, Education Consultant

Holiday time means enjoying the festivities and gearing up for tinsel and tissue paper. While most of us enjoy decorating and getting into the holiday spirit we have to remember what code does and doesn't allow.

Schools often are having Winter formals and holiday dances or elementary schools are preparing for classroom parties. Keep in mind when adding decorations to your classroom or hallways that you keep safety at the forefront.

Code does not allow any exit doors obstructed or blocked. This includes disguising the doors with decorations. Remember to keep sprinkler heads free from obstructions such as hanging items from them or the piping.

Artwork should be limited on the walls of the corridors to no more than twenty percent of the wall area in Group E Occupancies.

In healthcare facilities, we often find that doors are disguised for memory care purposes. This too is a code violation. Deterring patients from going of out exit doors is certainly a concern; however, being able to quickly exit in the event of a fire is priority in the Life Safety Code.

While code does not allow live trees in healthcare facilities, artificial trees can be used if they are fire retardant. (i.e. NFPA 701) When we are trying to keep occupants safe inside our buildings, we must remember that a little decoration can go a long way. Adding “fuel” such as combustible material to a fire can make it burn longer and hotter. Keeping decorations to a minimum helps to reduce this risk.

Be aware that even applying a flame retardant product to decorations can still pose an issue if the product is not used correctly or may not be the proper product to be used. Be sure to keep the documentation available for the inspector to view.

Christmas time is filled with family, food, joy, laughter and traditionally the Christmas tree. From buying presents to making desserts, it is easy to overlook potential fire hazards. Following a few simple precautions can keep your family and Christmas tree fire safe:

- When picking the tree, choose one with fresh, green needles that do not fall off when touched.
- Before placing the tree in the stand, cut 2” from the base of the trunk.
- Make sure the tree is at least three feet away from any heat source, like fireplaces, radiators, candles, heat vents or lights.
- Make sure the tree is not blocking an exit.
- Add water to the tree stand. Be sure to add water daily.
- Use lights that are listed by a qualified testing laboratory. Some lights are only for indoor or outdoor use.
- Replace any string of lights with worn or broken cords or loose bulb connections. Read manufacturer’s instructions for number of light strands to connect.
- Never use lit candles to decorate the tree.
- Always turn off Christmas tree lights before leaving home or going to bed.
- After Christmas, get rid of the tree after Christmas or when it is dry. Dried-out trees are a fire danger and should not be left in the home or garage, or placed outside against the home.

School Safety Inspections

By Joel Beckner, Education Consultant

Conducting fire inspections of schools can be very challenging at times. The school year is jam-packed with all sorts of events and, before you know it, the end of the year is just around the corner.

It is important to note that according to Kansas Statute 31-144: [All school buildings shall be inspected at least once each year. In all cities of the first and second class in which there is a full-time fire chief or full-time fire inspector, the inspection of the school buildings shall be conducted by such chief or inspector. The chief or inspector shall report the findings from the inspection to the state fire marshal within 30 days after such inspection. In all other cases, school buildings shall be inspected by the state fire marshal or the fire marshal's authorized assistants.]

Something else to keep in mind is that before new construction, renovation or addition projects can begin, a code footprint must be submitted to our office for review.

If you have any questions about an upcoming inspection, please give our office a call and we will help in whatever way we can.

Thank you for your all your hard work and dedication to keeping Kansas fire safe. We know that it is not always easy to comply with code. As we continue to work together we will be able to provide Kansas citizens with the safest buildings we possibly can.

~OSFM


Thank you!
for helping to
keep our
beautiful state
fire safe